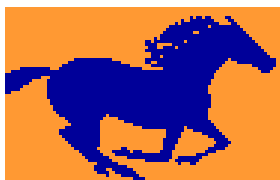# Chadwick
Engineering Ltd.

TITAN TRAINER
EQUINE TREADMILL
MODEL 1677-2

USER'S MANUAL

INSTALLATION – OPERATION - MAINTENANCE

Chadwick Engineering Ltd.
633 Norris Court
Kingston, Ontario - Canada - K7P 2R9
www.chadwickengineering.com

Sales and Customer Support
(613) 384-2866

TABLE OF CONTENTS

1.0 *TITAN Trainer* Overview

The *TITAN Trainer* is a robust treadmill for equine performance training and rehabilitation. The wide treadmill belt and see-through side panels coupled with the operator friendly control system and safety devices make this equine treadmill a valuable tool for any horse owner, trainer or equine veterinary clinic.

1.1   Features

The *TITAN Trainer Equine Treadmill* features include:

- Variable speed 0 to 15 MPH
- Variable incline 0 to 8.0 Degrees.
- Wireless Heart Rate Monitoring System
- Automatic Belt Lubrication System
- User friendly controls with LCD Colour Touch Screen display
- Selection and storage of up to 40 Horse Names
- Selection and storage of 20 User Configured Programs
- Data Logging including Program Number, Horse Name, Speed, Incline, Heart Rate
- Safety Stop System – Emergency Stop Pushbutton , Safety Strap and Stumble Sensor
- Steel Construction with Corrosion Resistant Paint System
- Durable Transparent Polycarbonate Side Panels
- Energy Absorbing Deck
- Durable Non-slip Mini-Cleat Belting on Ramps
- Durable Long Life Belt
- Spring Lift Assist on Entry Ramp (for cleaning)
- Stainless Steel Hardware
- UHMW Polyethylene Hoof Guards

1.2 Specifications

Overall Dimensions (with ramps)	20'-9"L x 6'-4"W x 6'-7"H
Deck Dimensions	3' Wide x 10' Long
Height (above deck)	5'-2"
Weight	3500 lbs
Speed	0 to 15 mph
Incline	0 to 8 deg
Belt Drive Motor	10 HP
Incline HPU Motor	1 HP
Electrical Power	208 - 230 VAC, 1 Ph, 50 Amp.
Ambient Operating Temperature	5 to 40 ºC

2.0 Safety

2.1 Operator Safety

As always, when working with horses, care must be taken so that neither the handler nor the horse is put in an unsafe position especially around new unfamiliar equipment.

CRUSHING HAZARD !!

The *TITAN Trainer* is powered to an incline position (maximum angle is 8 degrees). At no time shall anything be placed under the machine since it could be crushed when the machine returns to the level position. In Automatic Mode, the frame UP/DOWN motion is controlled by the program, i.e. not initiated by the operator. In the case of an Emergency Stop, the treadmill belt will stop and the incline will not change. Once the E-stop is reset and the power is reapplied the treadmill will return to its level position. This crushing hazard could result in serious injury or death. Special care shall be taken to keep children away from this machine when it is powered!!!

PINCH HAZARD !!

The treadmill belt can travel at high speeds and is powered by a high torque gear motor. This moving belt creates a pinch hazard as it passes around the rolls and close to the treadmill floor at the entry end of the treadmill. Serious injury can result if fingers or toes become trapped at these pinch points. For this reason, the treadmill is not intended for human use. Special care shall be taken to keep children away from this machine when it is powered!!!!

ELECTRICAL SHOCK !!

Before opening any electrical enclosures, ensure that the power is disconnected. Electrical shock can cause serious injury or death.

2.2   Horse Safety

Special care has been taken with the *TITAN Trainer* to minimize any potential hazards for the horse. The wide ramps are covered with a non-slip cleated belting to provide the horse with a sure-footed grip. No sharp edges or corners are exposed where the horse could be injured. A horse shall not be left unattended on the treadmill.

A tail strap restrains the horse from backing out of the treadmill. If the tension in the tail strap becomes too high, the strap releases and the treadmill stops. The tail strap release tension can be adjusted so that more or less strap tension will cause the strap to release and the treadmill to stop. The manual tail strap release on the left side of the machine can be actuated even under high strap tension.

The horse must be cross-tied to its halter to be restrained from moving forward. The cross-ties should keep the horse close to the tail strap to minimize the possibility of a horse kicking over the strap and causing injury.

In the rare case that the horse was to stumble and fall, a stumble sensor photo-beam will stop the treadmill immediately. The sensor must be blocked, i.e. the horse standing on the treadmill, breaking the photo beam, in order for the treadmill to be started and the beam must remain blocked at all times during any cycle or the treadmill belt will stop.

3.0 Trainer Installation & Setup

3.1   Mechanical Installation

The *TITAN Trainer* is delivered fully assembled. It must be placed on a level concrete floor or pad. Once the treadmill is in position, leveling feet on the frame at the entry end must be adjusted so that both leveling feet and the front incline rollers are in firm contact with the floor. After adjusting the feet, the locking nuts must be tightened to lock the adjustment screws in the position. Position the manure collection pan under the belt at the entry end and lower the entry and exit ramps. If both ramp wheels do not contact the floor, the ramp hinge attachment bolts can be loosened and the ramp adjusted.

3.2   Electrical Installation

The *TITAN Treadmill* comes complete with all electrical wiring intact. Provisions for power supply connection have been included complete with a 3 meter cord and plug attachment (pre-installed) rated for 50amps. Also supplied loose is the 50amp rated mating receptacle. This receptacle must be installed by the user. Please refer to local electrical codes to determine receptacle installation method and location requirements. A 50amp, 208-230VAC, 1Ø power supply circuit is required. This circuit must be protected at the source with short circuit and thermal protection as per local authority electrical requirements.
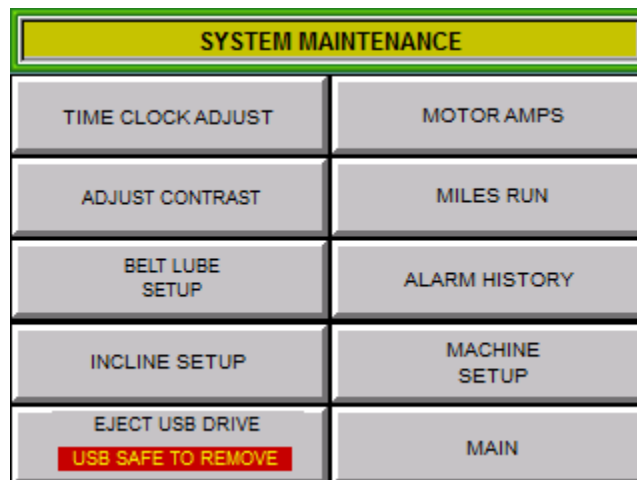
3.3 Operator Interface Settings

The trainers' operator interface requires initial setup up of the following:

- Contrast Adjustment
- Clock Adjustment – Hour Only
-

To reach the initial setup press the 'SYSTEM MAINTENANCE' button from the main screen. The 'SYSTEM MAINTENANCE' screen will be displayed. Select the desired setup screen.
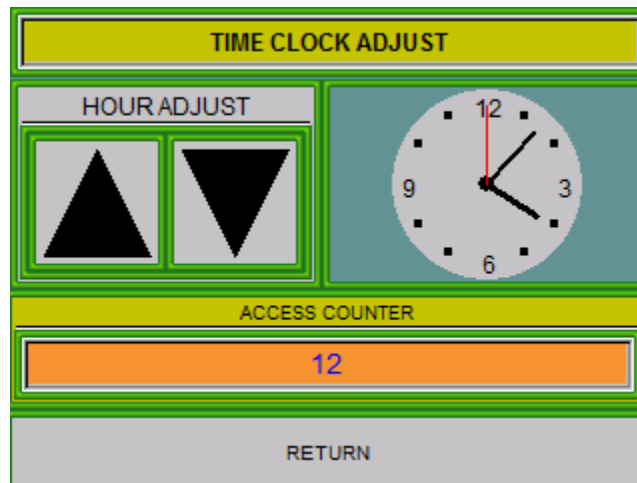

Main Screen

System Maintenance Screen

PLC DATE/TIME

To access the system date and time settings of the touch screen, from the 'SYSTEM MAINTENANCE' screen press the 'PLC DATE/TIME'. Below depicts the adjustment screen.

To adjust the time, press the adjustment field (fields with black background). A keypad entry screen will appear. Enter the desired field parameters ie. for YEAR/MONTH such as December of 2012 enter '1212'. When all fields are adjusted as required press the corresponding Update pushbutton to initiate the change.
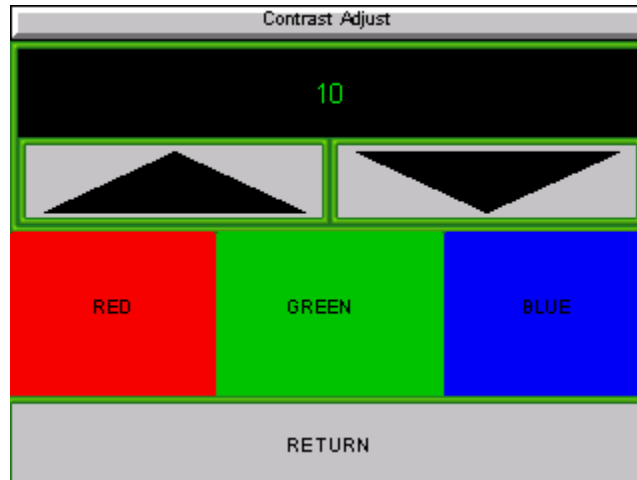
The 'Access Code' number is for manufacturer use only. No adjustment to this code can be made by the user.

ADJUST CONTRAST

To access the colour and brightness settings of the touch screen, from the 'SYSTEM MAINTENANCE' screen press the 'ADJUST CONTRAST'. Below depicts the adjustment screen.

Contrast & Time Setup Screen

To adjust the time, use the corresponding arrow keys to increment or decrement the hour. The hour is the only time maintenance function adjustment available.

To adjust the contrast, use the corresponding arrow keys. Adjustment levels from 1 to 7 can be made. The red-green-blue bars show what these colours will look like at the current contrast adjustment level.

3.4   Belt Lubrication

The *TITAN Trainer* comes with an automatic Belt Lubrication System (BLS). The BLS is equipped with a lubrication fluid low level detector and an automatic belt lube spray pump. If the lubrication fluid in the reservoir reaches a low level the following message will appear on the main screen as depicted below.

Main Screen

The automatic belt lubrication cycle settings can be adjusted from the Belt Lube Setup screen. The belt lube setup screen can be accessed from the "maintenance screen. The following adjustments can be made:

BELT LUBE DAYS SETPOINT:

The belt lube days set-point is the number of days in between lube cycles. This setting is adjustable from 1 to 14 days.
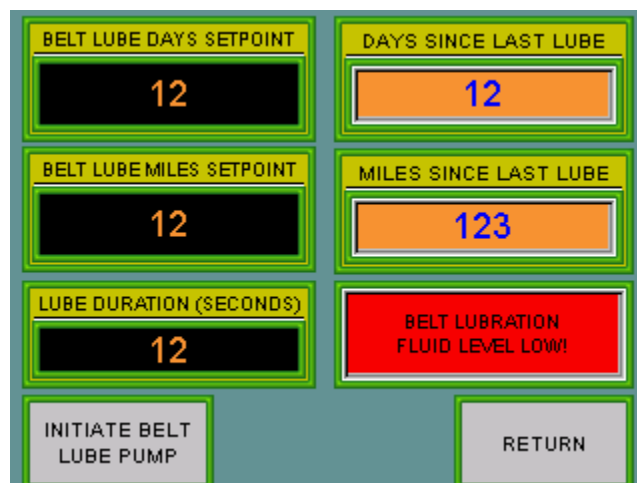
BELT LUBE MILES SETPOINT:

The belt lube miles set-point is the number of miles in between lube cycles. This setting is adjustable from 10 to 99 miles.

LUBE DURATION(SECONDS):

The lube duration is the number of seconds the lubrication fluid is applied. This setting is adjustable from 10 to 30 seconds.

The default lubrication cycle is a lubrication application for 10 seconds every 7 days or 59 miles which ever comes first. Under some conditions more belt lubrication may be required. Belt drive motor current levels will indicate more lubrication required.

The *TITAN Trainer Equine Treadmill* uses a belt lubricant that is specifically developed for treadmills. The treadmill warranty requires that only this lubricant be used. The treadmill is delivered with two gallons of lubricant in the reservoir. Lubricant can be ordered from Chadwick Engineering Ltd.

Belt Lube Setup Screen

The lubrication cycle will occur automatically during treadmill operation at the beginning of a manual or automatic program. The cycle is initiated based on the Belt Lube Days setting or the Belt Lube Miles setting, which ever comes first. On completion of a lube cycle, the accumulated miles and days since the last lube will be reset to 0. Below depicts the message that appears during a lube cycle.
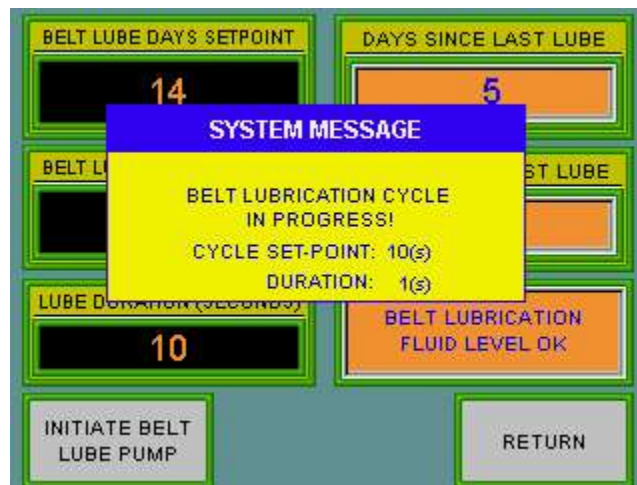
Belt Lube Setup Screen

3.5   Incline Setup

Once the treadmill is positioned and on the level the incline should be zeroed. To zero the incline, ensure the control power is on, see section 3.2 for control power application, from the 'MAIN' screen press the "SYSTEM MAINTENANCE" in the lower left hand corner of the screen. A numeric pop up window will appear requesting a security code to access the maintenance functions. Enter the access code and press 'ENTER'. From the System Maintenance Screen select the Incline Setup screen. Below depicts the INCLINE SETUP screen.
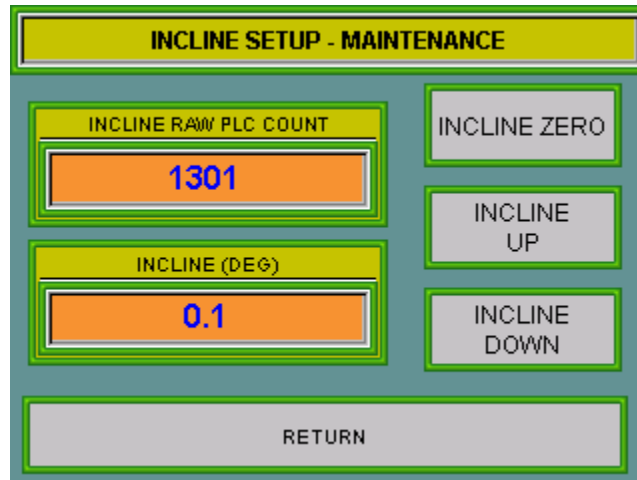
Incline Setup Screen

With the control power on press and hold the 'INCLINE DOWN' button until there is no more movement of the treadmill. To initiate to zero command press the 'INCLINE ZERO' button. The incline display should then read 0.0. The trainer is now ready to use.

INCLINE (DEG):

This display is the current incline of the trainer

INCLINE RAW PLC:

This display is the trainers' controller digital value of the actual incline position. This value is used at the factory for incline calibration purposes only.

INCLINE FACTOR:

This adjustment is used by the factory to calibrate the incline position transducer. This adjustment is not available to the user.

3.6 USB Functions

The trainer is equipped with a USB pen drive that is plugged into the system on the left side of the operator control panel. The Trainer writes training data to this drive. To remove the USB drive, press the EJECT USB DRIVE button as depicted below. The indicator to the right of the button should be red and read USB EJECTED prior to drive removal.
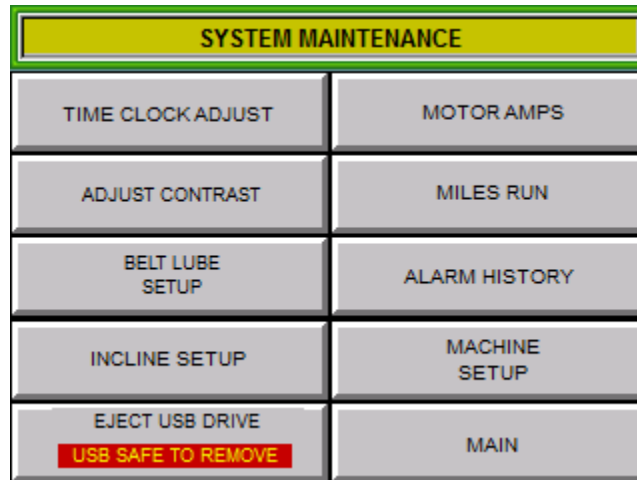
USB Functions Screen

When the USB drive is plugged back into the system, the indicator will be green and read USB READY TO USE when the system has accepted the drive and is able to write training data to the drive. It may take a few minutes for the system to accept the drive.
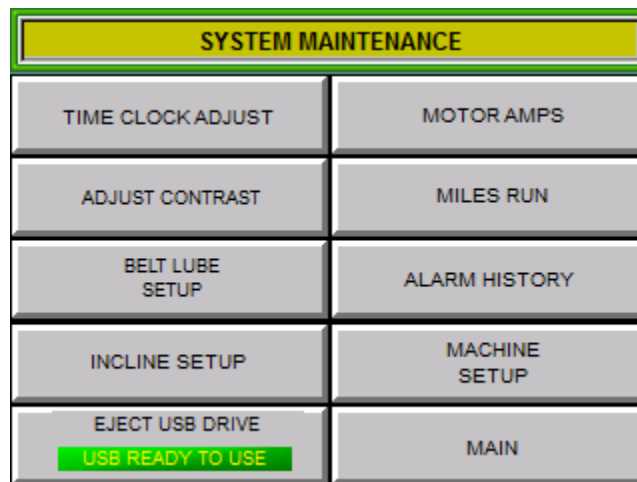
USB Functions Screen

3.7   Motor Amps

The MOTOR AMPS screen displays the belt motor current in amperes.
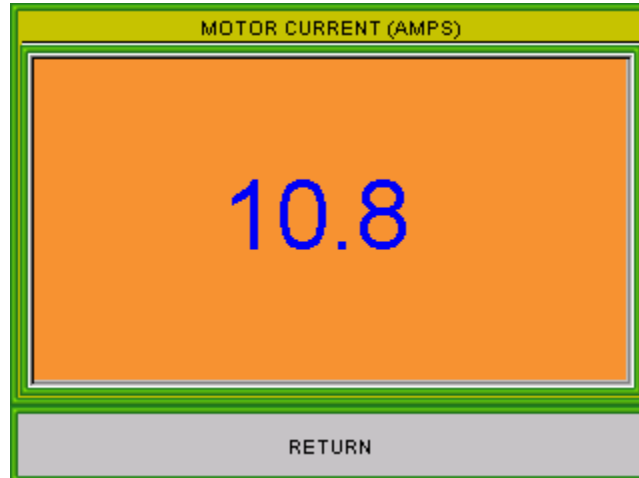
Motor Amps Screen

3.8 Miles Run

The MILES RUN screen displays the Trainers total miles run.
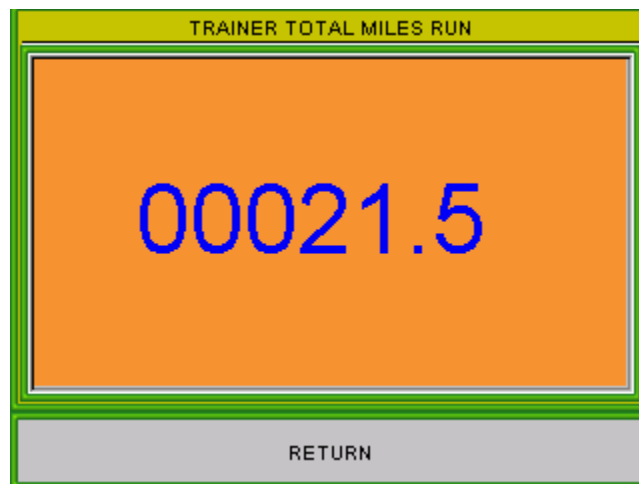
Miles Run Screen

4.0 Trainer Operation

4.1   Emergency Stop

The *TITAN Trainer* is equipped with an emergency stop mushroom head type pushbutton that can be used to de-energize power to the belt drive motor and hydraulic power unit (for incline movements) in the case of an emergency situation. This button is located to the left of the user touch screen.

4.2   Control Power

The control power must be on to use the trainer. The main screen below shows the "Power Off" message that appears if the control power is off. (Note: Even with power off, the Programmable Logic Controller (PLC) and the Main Screen remain powered.) In addition to the message, the Power On/Off green illuminated pushbutton to the left of the touch screen will be off (not illuminated).

To turn the control power on, first ensure the emergency stop is not depressed. Press the green "Power On/Off" pushbutton to the left of the touch screen. The green light on the pushbutton should illuminate. Likewise the control power can be turned off by pressing the button a second time. Power cannot be re-applied until 30 seconds after the last power off. If the power has been turned off within the last 30 seconds and the user attempts to turn the power on the touch screen will display a wait message with the remaining time left before the power can be turned on.

Main Screen with Power Off & Wait Messages

4.3   Alarms

Should a trainer failure occur, the operator screen displays the fault condition on the bottom of the touch screen. The following is a list of possible faults and corrective actions.

Alarm	Description & Alarm Detail	Diagnosis & Corrective Action
1	**Stumble Sensor Not Working!** If the sensor does not detect the reflector located opposite it for more than 120 minutes it is presumed there is a fault.	Check to ensure the surfaces of the reflector and the photo-sensor are clean and in place. If the reflector and the sensor are OK then the sensor may require replacement.
2	**Emergency Stop!** The emergency stop button has been depressed.	Pull the button out and then press the Stop/Pause/Reset Button to clear the alarm.
3	**Incline Failure!** The trainer has failed to raise or lower to the incline set-point.	Incline transducer may need to be zeroed. See Section 3.4
4	**No Horse Selected – Pick Horse First!**	To use either a manual or auto cycle a horse name must be selected. If the default ---------- is displayed for the Horse Name, the trainer will not permit operation.
5	**Stumble Sensor Tripped!!!** During treadmill operation the stumble sensor detected the reflector on opposite side indicating the horse stumbled or fell.	To restart, ensure the horse is ready and in position. Press the stop button to reset the alarm. A manual or automatic cycle can now be started.
6	**Tail Strap Tripped!!!** During treadmill operation the tail strap sensor detected the strap was displaced indicating the horse backed heavily into the strap.	Reset the tail strap release mechanism and increase release setting if required by tightening the clamp bolt. To restart, ensure the horse is ready and in position. Press the stop button to reset the alarm. A manual or automatic cycle can now be started.
7	**Belt Drive Fault!!!** The electronic belt drive has faulted.	Press the Stop button to reset the drive fault. If persistent drive faults occur remove the rear platform cover on the operator side of the treadmill and record the fault code listed on the drive display. Refer to X4 AC Drive User's Manual for troubleshooting details.

4.4 Cycle Modes

The *TITAN Trainer* Model 1677-2 can be used in either of two separate cycle modes, Manual Cycle and Auto Cycle. These cycle modes are further described in the sections below. To select the cycle mode, on the Main Screen shown below, touch the screen button for the desired mode.

Main Screen

4.4.1 Manual Cycle

In manual cycle mode the user has the ability to manually adjust the cycle time, speed, incline and also either select or enter a horse name. The data logging system is active and recording. To start a manual cycle, the manual cycle screen must be displayed. Press the start pushbutton on the operator control panel (to the right of the touch screen). To stop the cycle, press the Stop pushbutton. To resume a cycle that has been stopped, press the Resume pushbutton. Pressing the Start button during a cycle will reset the cycle timer and start the cycle from the beginning.

Manual Cycle Screen

Numeric Keypad

Alphanumeric Keypad

Cycle Time
The cycle time can be adjusted from 0.0 to 60.0 minutes. To adjust the cycle time, use the up and down increment/decrement arrow keys located to the right of the Time Set Display or press the Time Set Display. A numeric keypad will pop up, key in the desired cycle time and press 'enter' to accept. The manual cycle screen also includes a time left display.

Speed
Speed can be adjusted before and during treadmill operation between 0.0 to 15.0 miles per hour. To adjust the speed, use the up and down increment/decrement arrow keys located to the right of the MPH Set display or press the MPH Set Display. A numeric keypad will pop up, key in the desired speed and press 'enter' to accept. Speed is included in the data collection system.

Incline
Incline can be adjusted before and during treadmill operation between 0 to 8 degrees. To adjust the incline, use the up and down increment/decrement arrow keys located to the right of the Incline Set Display or press the Incline Set Display. A numeric keypad will pop up, key in the desired incline and press 'enter' to accept. Incline is included in the data collection system.

Cycle Miles
The miles the horse has run is displayed under cycle miles. Cycle miles is reset each time the start pushbutton is pressed.

Heart Rate
The horses' heart rate in beats per minute is monitored and displayed at all times providing the horse has been fitted with the heart rate transmitter. Heart rate is included in the data collection system.

Horse Name
A horse name is selected. The horses name is tied to the data collected during a treadmill cycle. Previously stored horse names can be selected by pressing the Select Horse display. Alternately a new horse name can be entered manually by pressing the Horse Name Display. An alpha numeric key pad will pop up. Once the name has been keyed in, press the enter ('ENT') button to accept the entry. This name will not be stored in memory. If a horse name has not been stored, press the Select Horse Display then the Setup Horse Name Display. Select the location where the new horse name will be stored and enter the name.

Manual Cycle Start
To start the manual cycle, press the Start pushbutton to the right of the touch screen.

Manual Cycle Stop/Pause/Alarm Reset
To stop or pause the manual cycle, press the Stop pushbutton to the right of the touch screen.

Manual Cycle Resume
If the manual cycle was stopped prior to finishing, it can be resumed by pressing the Resume pushbutton to the right of the touch screen providing the user has not left the Manual Cycle Screen.

Manual Cycle Large Display Screen
At any point in time, if the user would prefer to monitor the cycle with larger graphics, touch the middle of the Manual Cycle Screen and a Large Display Screen will appear as depicted below. To return to the normal Manual Cycle screen touch anywhere on the Large Display screen.
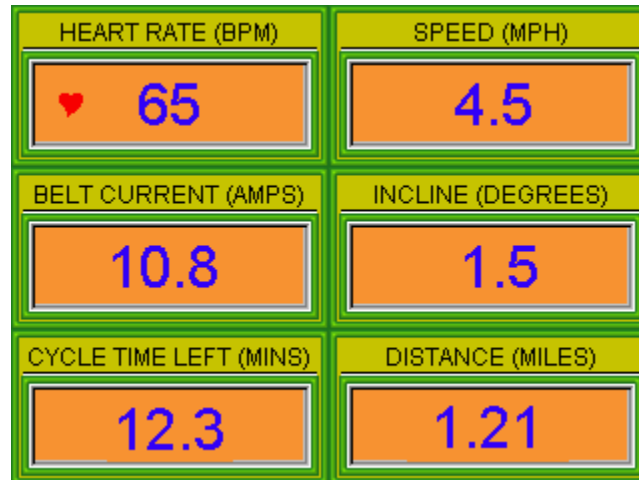
Manual Cycle Large Display Screen

4.4.2 Auto Cycle

To initiate an automatic training cycle, from the main screen select 'Auto Cycle'. The screen will change to the 'Select Horse and Training Program' screen which displays the current Horse Name, Program Number as well as the post program cool down time setting and cool down speed setting.

Select Horse and Training Program Screen

Horse Name

The default horse name that appears is '----------'. One of the 40 programmed horse names must be selected in order to proceed. To select a horse touch the current horse selection window. The 'Select Horse' screen will appear as depicted below. The first twenty horses are displayed. To view the next 20 horses touch the '<<<MORE HORSES' button in the lower left hand corner, the next 20 horses will be displayed. To select a horse touch the cell with the horse's name.
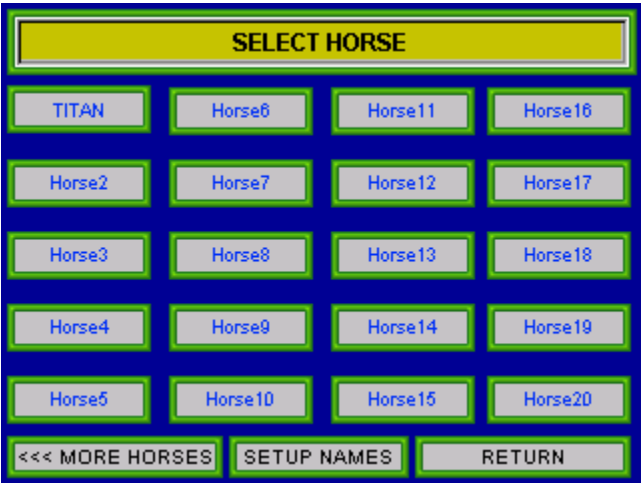
Select Horse Screen

Program Number

The last program the selected horse was trained on will be displayed below the horse name. The user can change this program to any of the 20 stored programs. To select a different program touch the current the Program Number Display. The 'Select Program' screen will appear. To select a program touch the program number as depicted below.
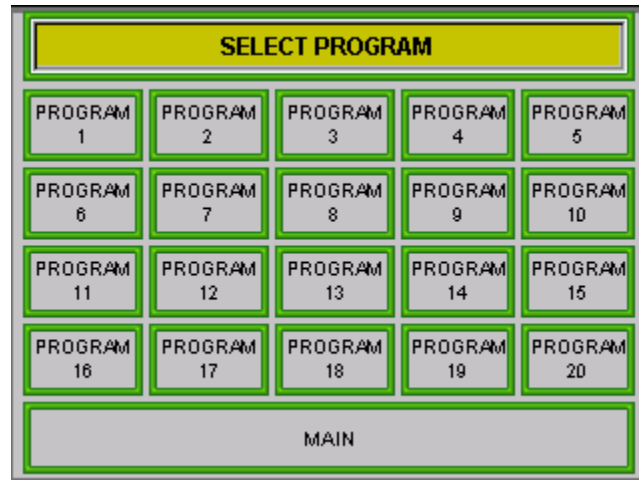
Cool Down Time
On completion of the training program an additional time (up to 20 minutes) can be programmed to cool the horse down. This cool down time can be adjusted using the up and down arrow buttons located to the right of the cool down time display or by touching the Cool Down Time Display. A numeric entry keypad will appear. Type in the desired cool down time and press the 'Enter' key to accept the change.

Cool Down Speed
The speed at which the horse cools down can be adjusted by using the up and down arrow buttons located to the right of the Cool Down Speed display or by touching the Cool Down Speed Display. A numeric entry keypad will appear. Type in the desired cool down speed and press the 'Enter' key to accept the change.

Cool Down Incline
The incline during the cool down cycle is fixed at 0 degrees.

To accept the horse name, program number and cool down settings and proceed to start the training program press the 'Confirm' button. The 'Auto Cycle' screen will appear as depicted below. The program incline and speed are graphically depicted along with the length of the program. If this is not the desired program, touch "Return" to display the "Select Horse and Training Program" screen and select a different program.
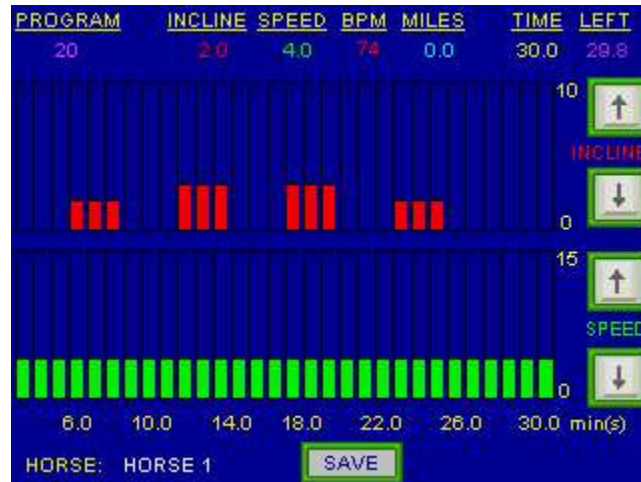
Auto Cycle Screen

Auto Cycle Start
To start the auto cycle, press the Start pushbutton to the right of the touch screen.

Auto Cycle Stop/Pause
To stop or pause the auto cycle, press the Stop pushbutton to the right of the touch screen.

Auto Cycle Resume
If the auto cycle was stopped prior to finishing the cycle and providing the user has not left the Auto Cycle Screen, the cycle can be resumed by pressing the Resume pushbutton to the right of the touch screen.

5.0 *TITAN Trainer* Program Management

The *TITAN Trainer* model 1677-2 treadmill is equipped with a colour touch display panel that allows the user to customize and store up to 40 user horse names and 20 programs.

5.1 Horse Name Configuration

The trainer is shipped with horse names pre-configured from 'HORSE1' to 'HORSE40'. To customize these horse names from the 'MAIN' screen, touch the 'SETUP HORSE NAMES' button. The 'EDIT HORSE NAMES' screen will appear. The first twenty horses are displayed. To view the next 20 horses touch the '<<<MORE HORSES' button in the lower left hand corner, the next 20 horses will be displayed. To select a horse name to edit, touch the desired horse name to be changed. An alphanumeric keypad will pop up. Type in the new horse name (up to 12 characters) and press the 'ENT' enter key to accept the change.
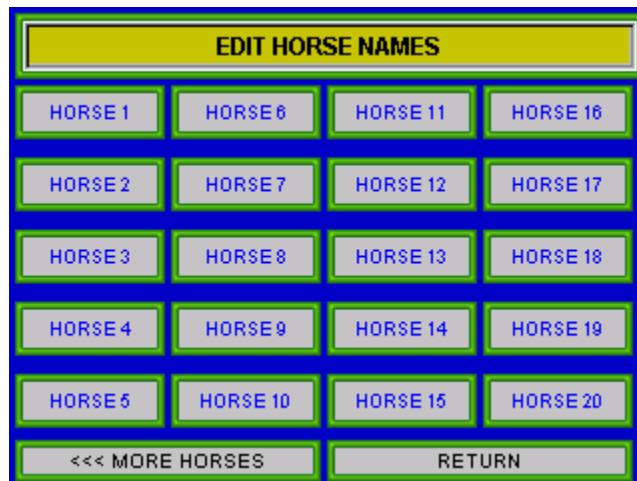
Edit Horse Names Screen
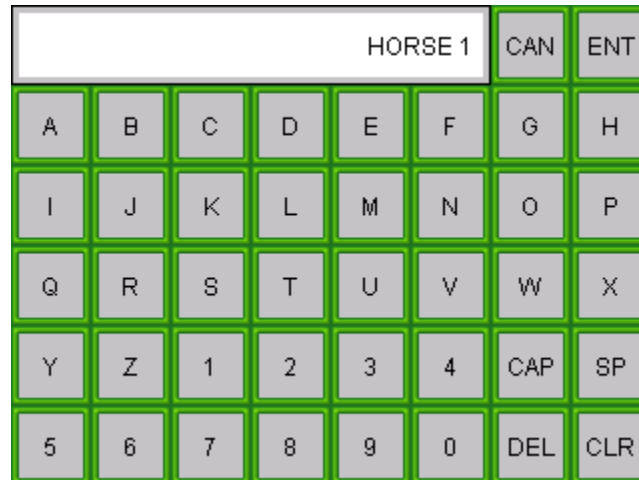
Alphanumeric Keypad

5.2   Training Program Configuration

The trainer is shipped with 20 pre-configured programs. To customize these programs from the 'MAIN' screen touch the 'SETUP TRAINING PROGRAMS' button. The 'SELECT PROGRAM' screen will appear. To select a program to edit, touch the desired program to be changed.
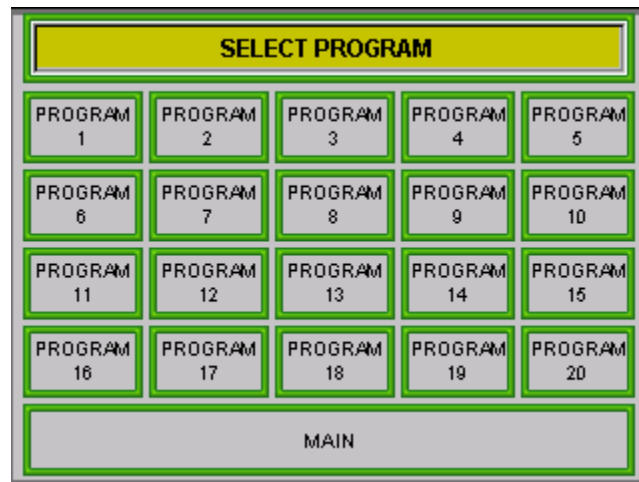
Select Program Screen

Once the program is selected the 'PROGRAM EDIT' screen will appear with the current settings of the program selected as depicted below. The program cycle time is made up of thirty segments; i.e. if the program cycle time is 30 minutes,

each segment will represent 1 minute increments of the program. Each segment, represented by bar graphs, includes a speed setting and an incline setting. To edit these settings for each segment use the left and right arrow keys at the bottom of the screen to select the segment to be edited. The active segment for editing will flash.
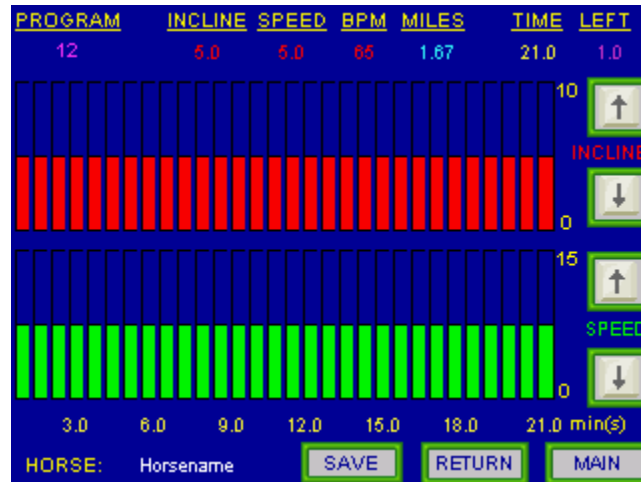
Program Edit Screen

To save the changes made to the program touch the SAVE button. If the return button is pressed a warning message appears as below.

Program Edit Screen with Warning Message

6.0 *TITAN Trainer* Maintenance

6.1 Adjustments

Belt Tension
The belt tension should be only tight enough so that the back side of the belt is 1 to 2 inches clear of the floor with the incline set to "0" degrees. The non-driven front idler roll rotates about a fixed shaft. This shaft is supported in adjustment blocks on both sides of the treadmill. These blocks can be moved forward and back individually by loosening the 4 clamp screws and rotating the adjustment bolt to either tighten or loosen the belt. Locking nuts on these adjustment bolts must be loosened before adjusting and retightened when complete. This roll must be aligned so the belt tracks the center of the driven roll.

Stumble Sensor
The stumble sensor consists of a photo transmitter/receiver mounted on the right side of the machine and a corresponding reflector mounted on the opposite side. When the photo-beam is blocked, i.e. a horse is on the treadmill, the *TITAN Trainer* will operate. If the photo-beam is not blocked, i.e. no horse or fallen horse, then the treadmill will not start or will stop if in operation. The sensor must detect a reflected beam every 2 hours or an alarm is generated. This alarm indicates that the photo-sensor/reflector is not functioning either because of dust on the lenses or a damaged sensor. Dust can be wiped off with a clean dry cloth.

Tail Strap Tension
Under high tension, the tail strap will release from the anchor point on the right side of the machine. High strap tension causes the pivoting anchor to rotate releasing the tail strap. When the anchor pivots, a proximity sensor is activated and the treadmill is stopped. The pivoting anchor can be reset by inserting the reset bar (supplied with the machine) into a hole in the anchor and rotating it back to its home position. Note that the loop in the end of the tail strap must be positioned over the anchor pin before resetting the pivoting anchor. The reset button on the control panel must be pressed to clear the fault and the training cycle can be resumed. The strap tension to cause the release can be increased or decreased by tightening or loosening the clutch bolt around which the anchor rotates. Care must be taken not to over tighten this clutch bolt or excessive strap tensions will be required to cause the strap to release. This could cause injury to the horse.

6.2 Cleaning

The floor under the treadmill must be kept clean and free of debris. The inclining feature of the machine requires that the wheels of the lifting frame roll on the floor as the treadmill incline angle changes.

As well the wheels on the ramps also roll on the floor when the incline changes. For these reasons it is essential that these areas are kept clear of dirt and debris.

The treadmill ramps will become dirty and can be simply swept clear or washed with mild soap and water.

The polycarbonate see-through side panels will become noticeably dirty from dust, sweat, hair, etc. These panels can be cleaned with mild soap and water. No abrasive materials should be used on the polycarbonate since the surface will be scratched.

6.3   Lubrication

Belt Lubrication

The *TITAN Trainer* is equipped with an automatic belt lubrication system. A level sensor in the reservoir indicates when the reservoir requires refilling. The reservoir must be filled with *TITAN Trainer* Belt Lubricant. (Note: See Appendix A for order form.) The reservoir fill cap is located under the operator control station on the top of the side cover.

Bearing Lubrication

Roll bearings are located at each end of the idler roll and driven roll. The idler roll bearings are mounted in the roll. Grease fitting access is gained through the access hole in the belt tension adjusting plates. The driven roll bearing grease fittings are located on the bearing mount pillow blocks. These bearings require grease lubrication with EP2 grease every six months.

Wheel Bearing Lubrication

Bearings on the lift arm wheels and ramp wheels are lubricated through grease fittings in the axle bolts. These bearings require grease lubrication with EP2 grease every six months.

Gearbox and Coupling Lubrication

The gearbox oil should never have to be replaced but the level should be checked yearly. If oil is required it must be filled with MOBIL SHC-634 or equal. The chain coupling between the gearbox and the drive roll must be sprayed with rust preventative oil every six months.

6.4   Hydraulic Power Supply

The level of oil in the hydraulic power supply must be checked yearly. Top up as required with ESSO NUTO 46 hydraulic oil or equal.

7.0 *TITAN Trainer* Report Tool Installation

7.1 System Requirements:

Windows XP Service Pack 2

7.2 Installation

The USB pen drive contains an install folder that contains the *TITAN Trainer* setup files. Install the report tool by navigating to Start → My Computer. Browse to the 'Install" folder. Double-click the file called 'setup'. The report tool will install to c:\Program Files\TITAN Trainer.

7.3 Un-installation

To uninstall the report tool, navigate to Start → Control Panel → Add or Remove Programs. Select the *TITAN Trainer* Report Tool and choose the 'Remove' button.

8.0 *TITAN Trainer* Report Tool

The *TITAN Trainer* Report Tool is software used to store, view and analyze training statistics for horses, training on the *TITAN Trainer*. The report tool is comprised of two parts: a software application interface and a database. The database contains the *TITAN Trainer* log information. The software application interface retrieves the database information and formats it to display useful report summary or chart information.

Data is transferred from the *TITAN Trainer* to the *TITAN Trainer* report tool with a USB pen drive. The flow of information occurs from the *TITAN Trainer,* to the USB pen drive, to a computer and finally, to the report tool database. When the *TITAN Trainer* is running, log information is stored on the USB pen drive that is plugged into the operator interface of the trainer. The pen drive is removed from the trainer and inserted into a computer where it is uploaded by the *TITAN Trainer* Report Tool. Once uploaded, the training data resides in the report tool's database. At this point, the training data can be displayed in useful log summary reports or performance charts.

Tools are provided in the report tool software to upload the trainer log files, view horse performance, and to perform maintenance operations on the report tool database. A ribbon tool bar, at the top of the report tool software contains buttons: Performance, USB Upload, Maintenance, Backup, Exit and About:

Detailed explanations for each of these buttons are provided in the sections below.

8.1   Log Summary

The log summary is the primary means for viewing summary information within the database. The log summary contains the following information:

Date	Horse Name	Program	Start Time on Treadmill	Elapsed Time	Average Speed	Average Incline	Weighted Average Heart Rate	Distance Travelled
Dec-15-2009	BE CALM	1	8:55:41 AM	32 min.	3.7 mph	0.8 deg.	0 bpm	1.90 miles
Dec-14-2009	BE CALM	1	8:51:19 AM	32 min.	3.7 mph	0.8 deg.	86 bpm	1.90 miles

Each line item represents a single run excercised by a horse. Runs are displayed for the horses and dates that are selected in the combo boxes at the top of the screen:

Select date to filter for a single day

Select horse to filter items for a single horse

	ALL	ALL						
Date	Horse Name	Program	Start Time on Treadmill	Elapsed Time	Average Speed	Average Incline	Weighted Average Heart Rate	Distance Travelled
Dec-15-2009	BE CALM	1	8:55:41 AM	32 min.	3.7 mph	0.8 deg.	0 bpm	1.90 miles
Dec-14-2009	BE CALM	1	8:51:19 AM	32 min.	3.7 mph	0.8 deg.	86 bpm	1.90 miles
Dec-14-2009	BEAUTIFUL SO	1	11:01:04 AM	32 min.	3.7 mph	0.8 deg.	57 bpm	1.90 miles
Dec-14-2009	BEAUTIFUL SO	3	10:28:22 AM	32 min.	3.7 mph	1.6 deg.	60 bpm	1.90 miles
Dec-14-2009	MR KENNY	1	10:00:41 AM	25 min.	3.6 mph	0.9 deg.	66 bpm	1.40 miles
Dec-14-2009	MR KENNY	4	9:27:27 AM	33 min.	3.8 mph	1.9 deg.	69 bpm	1.90 miles

The horses and dates that appear in the combo boxes are dependent on each other's value. For example, upon selecting a date, only horses that ran on that day will appear in the horse combo box. If a single date is chosen, a second combo box will appear below the first date. If a second date is selected, data will display for the horses that have runs in-between the two dates. For example, illustrated below, runs for beautiful so between December 12-14 are shown in the log summary.

Dec-14-2009	BEAUTIFUL SO							
Dec-12-2009			Start Time on Treadmill	Elapsed Time	Average Speed	Average Incline	Weighted Average Heart Rate	Distance Travelled
Date	Horse Name	Program						
Dec-14-2009	BEAUTIFUL SO	1	11:01:04 AM	32 min.	3.7 mph	0.8 deg.	57 bpm	1.90 miles
Dec-14-2009	BEAUTIFUL SO	3	10:28:22 AM	32 min.	3.7 mph	1.6 deg.	60 bpm	1.90 miles
Dec-12-2009	BEAUTIFUL SO	3	11:10:11 AM	32 min.	3.6 mph	1.6 deg.	59 bpm	1.90 miles

At the bottom of the screen, more controls are available:

Check to include log summary information below the chart.

Remove the selected record from the database

| Dec-10-2009 | ANGEL | 3 | 8:48:16 AM | 31 min. | 3.7 mph | 1.4 deg. | 0 bpm | 1.90 miles |
| Dec-10-2009 | BE CALM | 1 | 10:36:01 AM | 31 min. | 3.6 mph | 0.8 deg. | 0 bpm | 1.90 miles |

Number of Records: 372   Totals: 158h 38min.   562.30 miles

View Report   View Chart   ☐ Include Summary Information on Chart   Delete Record

Trainer |◄ ◄ 1 of 372 ► ►| 🔽 Filtered Search
Select 'ALL' to view all dates.

Choose to print preview the report

Double-click the run or choose view chart to print preview a performance chart for the selected run

8.2 USB Upload

The USB upload operation transfers training log files from the USB pen drive into the report tool database. It is necessary to upload the training log data files before log summary or chart information can be viewed.

Horse training data is stored on the USB pen drive when it is plugged into the side of the *TITAN Trainer* operator panel. A text file containing the training data is stored on the USB pen drive for each calendar day that the *TITAN Trainer* operates. Remove the USB pen drive from the operator panel and insert it into a computer running the *TITAN Trainer* report tool. Use the report tool to read the training data from the USB pen drive, transfer the files into the database and then remove the training data from the USB pen drive. With exception, training data for the current day will remain on the USB pen drive. As an option, training data can be transferred from the pen drive or from any selected folder. Simply follow the prompts in the software to select another folder. Training data is normally removed from the pen drive, although the user may deny removal following the upload operation.

Press the 'Upload Training Logs' button to open a file browsing window. Select a file on the USB pen drive and click OK to begin the uploading operation. A window will open notifying the number of logs that were uploaded.   The basic upload operation is transfer of the USB pen drive data into the report tool's database; for a more comprehensive description, the report tool will:

- copy USB pen drive training data, unmodified, into a subfolder of the TTDataBackups folder, the subfolder name will be the volume name of the USB pen drive.
- transfer the training log data files into the report tool's database.
- verify each record in the database for validity.
- delete all of the trainer log files on the USB pen drive (or selected folder), other than the current calendar day
- notify the user of the number of logs uploaded from the USB pen drive

8.3 **Maintenance**

Training data is stored in the report tool database. After storing trainer logs from years of service, the amount of training data can increase to a volume that will slow the operation of the report tool processing.   Portions of the database can be purged/deleted to increase report/chart generation speed. From this ribbon tool, the user may

- Purge all records in the database.
- Purge all records for a given time period.
- Purge all records for a selected horse.

Take caution when purging the database, as this operation cannot be undone. In the event of accidental removal of training logs, trainings logs may be re-uploaded into the database simply by copying the training logs out of the TTDataBackups folder to a temporary folder and then uploading from this location.

8.4 **Backup Database**

The report tool database can be backed up by clicking the 'Backup Database' button on the ribbon toolbar. Click this button and a file save window will open; select the file save location and click save to complete the backup process.

To restore a backup database, simply replace the database file (C:\Program Files\TITAN Trainer\Titan Trainer Report Tool V1.0_BE.accdb) with the backup database file.

8.5 **Exit Report Tool**

Select 'Exit Report Tool' button to close the report tool database. Exiting the report tool in this manner will compact and repair the report tool database.

8.6 **About**

The 'About' button opens a report tool software information window.

9.0 Warranty

Equipment warranty covers a period of two years from date the equipment arrives at the customer's location. Chadwick Engineering Ltd. warrants its products to be free of defects in material and workmanship. Equipment misuse or lack of routine maintenance is not covered by this warranty. This warranty covers all components of the treadmill except consumables, i.e. Belt Lubricant is not included. In no event shall Chadwick Engineering Ltd. be liable for consequential damages.